Physics 119A

Thermal and Statistical Physics

Lectures: MWF 9:00 – 9:50 in Phelps 1160
Webpage: www.physics.ucsb.edu/~phys119A/fall2010

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Texts: Classical and Statistical Thermodynamics by Ashley Carter (required)
Thermal Physics by Daniel Schroeder (required)

Exams: In class midterm on Wednesday, Oct. 27.
In class midterm on Monday, Nov. 22
Final on Thursday Dec. 9 (8:00 AM-11:00 AM).

Grading: Course grades will be based on homework (20%), the midterm exams (20% each), and the final exam (40%).

Tentative outline:
We will be covering material loosely corresponding to Chapters 1-5 in Schroeder and Chapters 1-10 in Carter. An approximate guess at the timeline is:

Definitions, introduction/math review, 1st law  (weeks 1-2)

Enthalpy, heat engines, calorimetry & Thermochemistry  (weeks 3-4)

Entropy, 2nd law, absolute temperature, 3rd law  (weeks 5-6)

Free Energies and chemical potential  (weeks 7-8)
Selected applications (weeks 9-10)